UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,312	04/25/2001	Andrew C. Sturges	S01022/80655 (JHM/EJR)	6679

7590 08/30/2004	EXAMINER
James H. Morris	ELLIS, RICHARD L

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ART UNIT	PAPER NUMBER
2183	

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/842,312	STURGES ET AL.
	Examiner	Art Unit	
	Richard Ellis	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 June 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>38-48 and 50-61</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>38-48 and 50-61</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>June 4, 2004</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   Claims 38-48 and 50-59 remain for examination. Claims 60-61 are newly presented for examination.

2.   The text of those sections of Title 35, US Code not included in this action can be found in a prior Office Action.

3.   Claims 38-48 and 50-59 are rejected under 35 USC § 103 as being unpatentable over Cocke et al., U.S. patent 3,577,189, in view of Bruckert et al., U.S. Patent 4,742,451.

        Cocke et al. and Bruckert et al. were cited as a prior art reference in paper number 17, mailed March 4, 2004.

4.   The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 17, mailed March 4, 2004.

5.   New claims 60-61 are rejected under 35 USC § 103 as being unpatentable over Cocke et al., U.S. patent 3,577,189, in view of Bruckert et al., U.S. Patent 4,742,451.

6.   As to new claim 60, Cocke et al. taught a decode circuit (fig. 1a, 40) to receive (27) and decode fetched instructions (2), including the set branch instructions (fig. 5 "BRANCH"), and to supply the decoded fetched instructions, including the decoded set branch instruction, to the execution circuitry (DIVIDE, MULTIPLY, ADD, SHIFT, 42, 62).

7.   As to new claim 61, Cocke et al. taught that prior to executing the set branch instruction (fig. 1a, 62), decoding the set branch instruction (40).

8.   Applicant's arguments filed June 4, 2004, paper number 20040607, have been fully considered but they are not deemed to be persuasive.

9.   In the remarks, applicant argues in substance:

9.1.   That: "[Cocke et al. combined with Bruckert et al.] would not teach ... instruction fetch circuitry including a first instruction fetcher and a second instruction fetcher, wherein the second instruction fetcher is operative, *responsive to execution of said set branch instruction*, to fetch the new instruction from the location indicated by the set branch instruction" [emphasis unchanged]

        "even if these references were combined, no resulting combination would teach or suggest an instruction fetcher, responsive to *execution* of a set branch instruction, to fetch a new instruction from a location indicated by the said branch instruction, as recited in claim 38" [emphasis unchanged]

This is not found persuasive because as is clearly seen from Cocke et al.'s disclosure, it is execution of Cocke et al.'s set branch instruction (identified as "BRANCH" on fig. 5) which causes Cocke et al.'s system to perform it's advance branch processing aspects that are being utilized to reject applicant's claims (col. 2 lines 49-54, col. 3 lines 39-46, additionally note that Cocke et al. indicates that branches are executed at col. 2 lines 40-45). Therefore, because Cocke et al. taught that execution of a branch caused all the effects of his system to occur, the argued limitation is present in the main reference and does not need to be taught by the modifying reference to Bruckert et al.

9.2. That: "As noted above, Bruckert indicates that instruction words begin being prefetched from a "branch taken" instruction stream *in response to decoding* a conditional branch instruction. Further, Cocke does not teach or suggest the use of instruction fetch circuitry at all." [emphasis unchanged]

This is not found persuasive because as indicated above, Cocke et al. taught execution of branches, so therefore the fact that Bruckert et al. may or may not perform his function "in response to decoding" is not relevant to what Cocke et al. taught in regards to the claim language. Additionally, Cocke et al. did indeed teach fetch circuitry. Figure 1A, elements 1, 4, 6, 10, 8, and 2 are all related to fetching of instructions into the processor for execution.

9.3. That: "no resulting combination would teach ... the method comprising, *inter alia, in response to executing* said set branch instruction, fetching the new instruction from said storage circuitry in parallel to fetching a subsequent instruction from the first instruction string, as recited in claim 52." [emphasis unchanged]

That: "no resulting combination would teach ... a computer system comprising, *inter alia*, ... means for fetching the subsequent instruction and the new instruction from the storage circuitry in parallel *in response to execution* of the set branch instruction, as recited in claim 59." [emphasis unchanged]

This is not found persuasive because as detailed above, Cocke et al. taught performing the advance branch function as a result of execution of a branch (fig. 5) instruction (col. 1 lines 45-51 and col. 3 lines 15-47). Therefore, because Cocke et al. already taught that the advance branch work is performed responsive to execution of a branch, the addition of Bruckert et al. to Cocke et al. does not require Bruckert et al. to additionally provide that same feature. Bruckert et al. is cited to show a teaching of having parallel fetch from both instruction

streams, and a structure and method for performing that parallel fetch from both instruction streams in response to a branch instruction. Because Cocke et al. taught performing all the work related to a branch at branch execution time (col. 1 lines 45-51 and col. 3 lines 15-47) one of ordinary skill in the art adding Bruckert et al.'s parallel fetch aspect to Cocke et al. would be motivated to perform the parallel fetch function additionally at branch execution time, for at least the reason that Cocke et al. quite clearly states that this is the time to perform the branch related functions.

10.   **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.
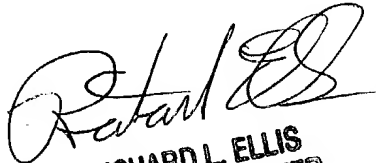
A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CFR § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

11.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Richard Ellis whose telephone number is (703) 305-9690. The Examiner can normally be reached on Monday through Thursday from 7am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eddie Chan, can be reached on (703) 305-9712. The fax phone number for the USPTO is: (703)872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Richard Ellis
August 25, 2004

RICHARD L. ELLIS
PRIMARY EXAMINER